

COMBATING TERRORISM TECHNOLOGY SUPPORT OFFICE

**BROAD AGENCY ANNOUNCEMENT (BAA)
W91CRB-07-T-0043**

Due Date for Receipt of Phase 1 Quad Charts:

No Later Than April 5, 2007

CB - Chemical, Biological, Radiological, and Nuclear Countermeasures

ED - Explosives Detection

IS - Investigative Support and Forensics

PS - Physical Security

TTD - Training Technology Development

VIP - VIP Protection

**All submissions are due by 1600; 4:00 p.m.
Eastern Time (ET) on the above date**

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1. INTRODUCTION.

This is a Combating Terrorism Technology Support Office (CTTSO) Broad Agency Announcement (BAA) issued under the provisions of paragraph 6.102(d)(2) of the Federal Acquisition Regulation (FAR) to provide for the competitive selection of research proposals. Contracts based on responses to this BAA are considered to be the result of full and open competition and in full compliance with the provisions of Public Law (PL) 98-369, "The Competition in Contracting Act of 1984." Awards for submissions under this BAA are planned in Fiscal Year (FY) 2008; however, some awards could be made in late FY 2007. Funds may not be available for all requirements under this BAA. No contract awards will be made until appropriated funds are available from which payment for contract purposes can be made.

1.1. Approach.

A three-phased proposal selection process will be used for this solicitation to minimize cost and effort of prospective offerors. Phase 1 will consist of the solicitation, receipt, and evaluation of a one-page Quad Chart. Phase 2 will consist of the solicitation, receipt, and evaluation of a White Paper (not to exceed 12 pages) and applies to only those submissions that have been accepted in Phase 1. Phase 3 will consist of the solicitation, receipt, and evaluation of a full proposal (not to exceed 50 pages) and applies to only those submissions that have been accepted in Phase 2. Based on the priority of critical requirements and the availability of funding, Phase 1 submissions can be selected for Phase 3 submittal of a full proposal without a Phase 2 submission.

1.2. HBCU/MI and Small Business Set Aside.

The Government encourages nonprofit organizations, educational institutions, small businesses, small disadvantaged business (SDB) concerns, Historically Black Colleges and Universities (HBCU), Minority Institutions (MI) (HBCU/MIs), women-owned businesses, and Historically Underutilized Business (HUB) zone enterprises as well as large businesses and Government laboratories to submit research proposals for consideration and/or to join others in submitting proposals; however, no portion of the BAA will be set-aside for these special entities because of the impracticality of reserving discrete or severable areas of research and development in any specific requirement area. A goal of 2.5 percent of total dollars awarded will be considered for HBCU/MI and a goal of 2.5 percent of total dollars awarded will be considered for small businesses for a total goal of 5 percent. The final determination will be made based on the individual technical merits of the proposal and budget constraints within the mission priorities. To ensure full consideration in these programs, registration in the [BAA Information Delivery System \(BIDS\)](#), described later in this document, requires the appropriate business type selection as well as accurate up-to-date information.

1.3. Limitation of Funds.

The Government intends to incrementally fund contracts awarded from this BAA as provided by FAR 52.232-22, "Limitation of Funds." Most contracts awarded are anticipated to be 6 to 24 months in duration. To facilitate incremental funding, submissions shall include the cost and schedule by a task-phased structure with clear exit criteria, and shall be inclusive of all work to complete the effort including any options. It is anticipated that the entire effort will be negotiated with the initial contract award.

1.4. Technical Evaluation Support.

It is the intent of this office to use contractor support personnel in the review, evaluation, and administration of all submissions for this BAA. All individuals in this category that will have access to any proprietary data shall certify that they will not disclose any information pertaining to this solicitation including any submission, the identity of any submitters, or any other information relative to this BAA; and shall certify that they have no financial interest in any submissions evaluated. Submissions and information received in response to this BAA constitutes permission to disclose that information to certified evaluators under these conditions.

1.5. BAA Package Download.

This BAA Package can be downloaded electronically in its entirety from www.bids.tswg.gov under [Download BAAs](#). Registration is not required to download the BAA package; however, a BIDS registration is required to upload a response to the BAA.

1.6. BAA Contractual and Technical Questions.

All contractual and technical questions regarding this BAA including the published requirements and instructions must be directed to the Contracting Officer at 07-T-0043@tswg.gov. The program and technical staff will not acknowledge, forward, or respond to any inquiries received in any other manner concerning the BAA. Contractual questions and answers will be posted periodically under [Frequently Asked Questions \(FAQs\)](#) on the [BIDS website](#).

1.7. BIDS Website Help Requests.

For technical help using BIDS, submit questions to the BIDS administrators at bidshelp@tswg.gov or by using the [Help Request](#) link located on the BIDS Homepage. Include a valid e-mail address, your BIDS User Name, and a detailed description of the question or concern in the comments block. The BIDS website provides other valuable resources under [Online Help](#), [Web-based Training](#), and [Doing Business with the Government](#).

1.8. BIDS Frequently Asked Questions (FAQs).

FAQs are a list of questions and associated responses for general and specific topics including those forwarded to the Contracting Officer for a BAA. Offerors are encouraged to periodically review [FAQs](#) located at www.bids.tswg.gov.

NOTE: *Persons submitting proposals are advised that only the Contracting Officer can obligate the Government to any agreement involving expenditure of Government funds.*

2. GENERAL INFORMATION.

This section includes information applicable to all contracts awarded under this BAA.

2.1. Eligibility.

To be eligible for contract award, a responsible offeror must meet certain minimum standards pertaining to financial solvency and resources, ability to comply with the performance schedule, prior record of satisfactory performance, integrity, organization, experience, operational controls, technical skills, facilities, and equipment. See FAR 9.104. Additionally, all offerors must be registered in the Central Contractor Registration (CCR) database, website www.ccr.gov, as indicated in FAR 4.1100. Contractors must complete Online Representation and Certifications (ORCA) at <https://orca.bpn.gov>. These and other helpful links are also provided on the [BIDS Homepage](#).

2.2. Procurement Integrity, Standards of Conduct, Ethical Considerations.

Certain post-employment restrictions on former federal officers and employees exist including special Government employees (Section 207 of Title 18, United States Code (U.S.C.)). If a prospective offeror believes that a conflict of interest exists, the offeror should make this known to the issuing office's Contracting Officer for resolution before time and effort are expended in preparing a proposal.

2.3. Definitions.

2.3.1. Small Business Concern (FAR 19.001).

A concern that is independently owned and operated; is not dominant in the field of operation in which it is bidding on Government contracts; and meets the size standards in FAR 19.102.

2.3.2. North American Industry Classification System.

Establishments that specialize in performing Professional, Scientific and Technical Activities for others are coded 541710 under the North American Industry Classification System (NAICS). The small business size standard for Classification 541710 is 500 employees.

2.4. Restrictive Markings on Proposals.

All proposals should clearly indicate content disclosure limitations. Submissions can be marked as "Proprietary" or words to that effect; however, markings such as "Company Confidential" or other phrases that could be confused with national security classifications shall not be used. All paragraphs that contain proprietary information must be clearly marked.

2.5. Submission Handling/Rights in Technical Data and Computer Software/Patent Rights.

2.5.1. Procurement Integrity.

The Government intends to comply with FAR 3.104 in its treatment of information submitted in response to this BAA solicitation and marked with the individual or company's legend.

2.5.2. Submission Information and FOIA.

Records or data bearing a restrictive legend can be included in the proposal. However, the offeror is cautioned that portions of the proposal are subject to release under the terms of the Freedom of Information Act (FOIA), 5 U.S.C. 552, as amended. In accordance with FOIA regulations, the offeror will be afforded the opportunity to comment on, or object to, the release of proposal information.

2.5.3. Rights in Technical Data and Computer Software.

Rights in technical data, and computer software and software documentation provided in the proposal are treated in accordance with the DFARS 252.227-7016, "Rights in Bid and Proposal Information." Rights in technical data, and computer software and computer software documentation in the resultant contract shall be in accordance with DFARS 252.227-7013 (regarding technical data) and DFARS 252.227-7014 (regarding computer software and software

documentation). Both clauses (DFARS 252.227-7013 and 252.227-7014) will be included in any non-commercial contract exceeding the simplified acquisition threshold. Table 1 contains these and related clauses to be included in the contract.

Table 1. Contract Clauses	
DFARS	Title
252.227-7013	Rights in Technical Data – Non-commercial Items
252.227-7014	Rights in Non-commercial Computer Software and Non-commercial Computer Software Documentation
252.227-7016	Rights in Bid and Proposal Information
252.227-7017	Identification and Assertion of Use, Release, or Disclosure Restrictions (FILL-IN)
252.227-7019	Validation of Asserted Restrictions - Computer Software
252.227-7025	Limitations on the Use or Disclosure of Government Furnished Information Marked with Restrictive Legends
252.227-7027	Deferred Ordering of Technical Data or Computer Software
252.227-7028	Technical Data or Computer Software Previously Delivered to the Government
252.227-7030	Technical Data - Withholding of Payment
252.227-7037	Validation of Restrictive Markings on Technical Data

2.5.4. Patents.

Patents in existence and patent applications pending at the time of the proposal, that relate to the proposed effort, shall be identified in the White Paper and Full Proposal in accordance with the clauses above.

2.6. Product and Deliverable Requirements.

All proposal phases shall include the costs for products and data deliverable requirements. Minimum report requirements include Monthly Status Reports (MSRs) and a Final Technical Report even if the research is to be continued under a follow-on contract or contract option. MSRs document program, technical, and financial status. The Final Technical Report summarizes the project and associated tasks at the conclusion of each contract. Include MSRs, the Final Technical Report, and any products and deliverables specific to the performance of the proposed effort. Additional products and deliverables could include prototype hardware, software, or systems; test plans; test and technical reports; technical data; specifications; requirements documents; computer programs or software; user manuals; drawings; or other products and data. The number, types, and preparation instructions for products and deliverables will be specified in the contract.

2.7. Distribution/Release Limitations.

The offeror should be aware that all resulting contracts or other awards will contain release limitations for all data resulting from the effort in accordance with DFARS 252.204-7000. This includes products, data, information, and services to be performed. The contractor shall protect all data and information from disclosure, and shall not release any data or information by any method of dissemination without prior Government approval.

2.8. Subcontracting.

Pursuant to Section 8(d) of the Small Business Act (15 U.S.C. 637(d)), it is the policy of the Government to enable small business and small disadvantaged business concerns to be considered fairly as subcontractors to contractors performing work or rendering services as prime contractors or subcontractors under Government contracts, and to assure that prime contractors and subcontractors carry out this policy.

2.9. Animal or Human Testing Compliance.

The contractor shall comply with all laws and regulations governing the use of animals or human subjects in research projects.

2.9.1. Animal Testing.

Any contract resulting from this BAA that potentially involves the testing of animals shall include the following language:

Any contractor performing research on warm blooded vertebrate animals shall comply with the Laboratory Animal Welfare Act of 1966, as amended, 7 U.S.C. §§ 2131 - 2156, and the regulations promulgated thereunder by the Secretary of Agriculture in 9 C.F.R. Parts 1 through 4, pertaining to the care, handling, and treatment of vertebrate animals held or used for research, teaching, or other activities supported by Federal contract awards. In addition, the contractor shall comply with the provisions of Department of Defense Directive 3216.1, as implemented by SECNAVINST 3900.38B, and DFARS 252.235-7002, "Animal Welfare," which is incorporated into this contract.

2.9.2. Human Subjects Testing.

Any contract resulting from this BAA that potentially involves the use of Human Subjects in the research or study shall include the following language:

The contractor shall comply with all regulations promulgated by the Office of the Secretary of Defense in 32 C.F.R. Part 219, pertaining to the protection of human subjects. In addition, the contractor shall comply with the provisions of Department of Defense Directive 3216.2. If human subjects are to be used at any time during the project, the contractor shall have a Federal assurance that is acceptable to the CTTSO before involving human subjects. Additionally, the protocol shall be approved by a Federally-assured Institutional Review Board (IRB) office named in the institution's assurance. The contractor shall prepare these documents and shall ensure that they are on file with CTTSO prior to the start of research involving human subjects. Collaborators with the contractor, to include IRBs, shall also comply with regulations to protect human subjects for both classified and unclassified research. The contractor shall report all changes in the protocol or consent form to the CTTSO Contracting Officer's Representative (COR) as they occur. Release of initial and follow-up funding will be contingent upon initial and continuing reviews, and to other IRB and component requirements.

3. PROPOSAL PREPARATION.

This section provides information and instructions for the preparation and submission of all proposals under this BAA. All submissions must meet these requirements including format, content, and structure, and must include all specified information to avoid disqualification, submission rejection, or delays in evaluation.

3.1. BAA Information Delivery System (BIDS).

BIDS at www.bids.tswg.gov is used to provide public access to the BAA package, to collect all unclassified submissions, and to collect placeholder records for all classified submissions. BIDS also provides submission progress tracking, evaluation comment collection, and results notification back to the submitter.

3.1.1. Submitter Registration.

A BIDS submitter registration is required to respond to this BAA. Existing BIDS accounts are acceptable for a new BAA *if the company contact information is the same* or is corrected. Registrations should reflect the offeror's contracting or business authority. The User Name is created by the offeror, must be unique, and is used for BIDS login and submission tracking. Registration acceptance for submitters is automatic, but takes several seconds to be recognized by BIDS. A success e-mail will be sent to indicate that the User Name and account are accepted. BIDS is e-mail dependent and uses the Registration e-mail as the single point of contact for all notifications associated with the BAA. This e-mail address should be monitored frequently during the BAA process for the notices. E-mail addresses included in the submissions or any other data field in BIDS will not be used for contact and notification purposes.

3.1.2. User Accounts and Password Resets.

Registration account information such as the point of contact (POC), e-mail, and password can be updated after login. The [Forgot My Password](#) link on the BIDS Homepage allows registered users with a valid e-mail address to automatically reset a password. The system will verify the account User Name and e-mail to send a new password to that e-mail.

3.1.3. Registration and Account Help.

BIDS Help requests can be e-mailed to BIDS administrators at bidshelp@tswg.gov or submitted via the [Help Request](#) link located on the [BIDS Homepage](#).

3.1.4. Header and Cover Page Information.

All Quad Charts must include the BAA Announcement Number, the Document Identifier, and Proposal Title in the header. Cover pages for all White Papers and Full Proposals must also contain this information along with mandatory contractual information. A Quad Chart template and sample as well as the cover page template are provided in BIDS under [Downloads, Reference Materials, Document Format](#). A cover page is not required for Quad Charts.

3.1.5. Document Identifier.

The offeror shall include the document identifier in the header of each submission. Document identifiers must match the BIDS submission record and should be constructed *before* upload to BIDS.

3.1.5.1. Constructing Document Identifiers.

Document identifiers, auto-generated in part by BIDS, are based on Subgroup or Mission Area, the requirement number, the user name, and a Submitter Internal Tracking (SIT) number. The underlined portion of the sample shown in Table 2 depicts the segment automatically formed by BIDS.

Table 2. Sample Document Identifier and Components Definition

CB-1112-ABCCORP-10703JT-QC	
From Sample	Document Identifier Component
CB	subgroup or mission area designation - from BAA
1112	requirement number - from BAA
ABCCORP	user name - from BIDS registration
10703JT-QC	SIT number - any alphanumeric combination (with no special characters or spaces) created by the submitter for (<i>submitter</i>) tracking purposes along with the document type suffix

3.1.5.2. Creating Submitter Internal Tracking (SIT) Numbers.

SIT numbers are unique identifiers created by submitters and entered in the submission record during the upload process. SIT numbers can be any alphanumeric combination (no special characters or spaces) chosen by the submitter plus a suffix indicating the document type. BIDS enforces unique SIT numbers and will not allow the submission record to be saved if the SIT number has already been used. Table 3 provides sample SIT numbering formats for each document type.

Table 3. Sample SIT Numbers for an Accepted Submission

Document Type	Auto-generated by BIDS	SIT#
Quad Charts	CB-1112-ABCORP	10703JT-QC
White Papers	CB-1112-ABCORP	10703JT-WP
Full Proposals	CB-1112-ABCORP	10703JT-FP

Offerors uploading more than one submission to the same requirement shall create unique identifiers by adding a numbered sequence to the document type suffix. Table 4 offers sample SIT number formats for multiple submissions to the same requirement.

Table 4. Sample SIT Numbers for Multiple Submissions to the Same Requirement

Submission #	Auto-generated by BIDS	SIT# Sample 1	SIT# Sample 2*
Submission 1	CB-1112-ABCORP	10703JT-QC1	QC1
Submission 2	CB-1112-ABCORP	10703JT-QC2	QC2
Submission 3	CB-1112-ABCORP	10703JT-QC3	QC3
* NOTE: If the submitter does not require an internal tracking number, use the document type designation.			

3.2. BIDS Security and Access Control.

All data uploaded to BIDS is secure from public view and download. All submissions will be considered proprietary/source selection sensitive and protected accordingly. The documents can only be reviewed by the registrant, and authorized Government and contractor representatives with no conflict of interest.

3.3. Submission Changes.

Changes to uploaded responses will be permitted up to the closing date and time. If a modification is required, update the original file in the source application and save. Convert to an acceptable format if applicable. In BIDS, open the submission record, click **Edit Submission**, and update the record information. Use **Browse** to select the revised document. Select the checkbox to remove the old attachment. Click **Submit for Processing** to save the changes. Documents cannot be edited online through the BIDS web interface. File names must contain no spaces or special characters. Ensure the file size does not exceed the size limit. To completely remove a submission from consideration, select **Delete Submission**. Changes after the requirement due date and time are not permitted.

3.4. Special Handling Procedures for Classified Information.

If a submission contains classified information, the offeror must first create a placeholder record in BIDS with an unclassified cover page attachment. Identify in the comments section of the submission record

that the submission cannot be uploaded due to classification. The BIDS tracking number (Document Identifier) must be clearly identified on the mailed document(s). Classified responses (up to SECRET) must be appropriately and clearly marked (including all paragraphs and pages containing the subject data), packaged, and shipped in accordance with classified material handling procedures and security regulations pertaining to the level of classification for that document.

To obtain mailing instructions for classified submissions, e-mail: BAAscurity@tswg.gov.

Classified submissions must be received by the applicable due date and time. Classification does not in any way eliminate the offeror's requirement to comply with all BAA instructions.

3.5. Phase 1 Quad Chart Submissions.

Offerors shall prepare and upload a one-page (8 ½ by 11 inches) Quad Chart in response to Phase 1 of this BAA. Use font sizes of 10 point or greater. If more than one page is submitted, only the first page will be evaluated. Quad Charts do not require a Cover Page.

3.5.1. Phase 1 Due Date and Time.

All unclassified Quad Charts must be received electronically through BIDS no later than 1600 (4:00 p.m.) Eastern Time (ET) on April 5, 2007. Likewise, classified submissions must be received by the same due date and time. Refer to the "Special Handling Procedures for Classified Information" in this document for instructions on classified submissions. BIDS does not allow proposals to be uploaded or classified placeholders to be created after the closing date and time. Any proposal, regardless of classification, submitted by any other means, or that is late will not be considered by the Government. Avoid the last minute rush; submit early.

3.5.2. Electronic File Format.

The Quad Chart shall be submitted in Microsoft Office (Word or PowerPoint), or Adobe Acrobat (PDF – portable document format). ZIP files and other application formats are not acceptable. The document must be print-capable, without password, and no larger than 500 kB. Filenames must contain the appropriate filename extension (.doc, .ppt, or .pdf). Filenames cannot contain spaces or special characters. Apple/Macintosh users must ensure the entire filename and path are free of spaces and special characters. Submissions that cannot be opened, viewed, or printed will not be considered.

3.5.3. Quad Chart Content.

A Quad chart conveys the essence of the proposed solution for a single requirement. When preparing a submission, the offeror shall ensure that the specific criteria of the requirement are addressed, the solution is clear, and can be accomplished with the proposed technology, cost, and schedule. The Quad Chart includes a document header and four quadrants. The Quad Chart format and sample are provided at the BIDS website under [Downloads, Reference Materials, Document Format](#).

3.5.3.1. Header Information.

Header information shall include the BAA Announcement number, the Document Identifier, and the Proposal Title. The date and company name should be included along with the appropriate document markings.

3.5.3.2. Top Left Quadrant, Graphical Depiction.

The top left quadrant is a graphical depiction, photograph, or artist's concept of the proposed solution or prototype. Include labels or brief descriptive text as needed for clarification. Ideally, this will convey the prototype concept, use, capability, and any relevant size or weight relationships based on the published requirement.

3.5.3.3. Top Right Quadrant, Operational and Performance Capabilities.

The top right quadrant contains the operational and performance capabilities summary.

Describe any basic, new, or enhanced capabilities the system will provide to meet the published requirement. In bullet form, list key aspects of performance, capability, operational use, relevant software or hardware specifications, and planned interface and/or compatibility.

3.5.3.4. Bottom Left Quadrant, Technical Approach.

The bottom left quadrant contains the proposed technical approach. Specifically, describe the technology involved, how it will be used to solve the problem, actions done to date, and any related on-going efforts. Briefly describe the tasks to be performed for each phase. A bullet list is acceptable.

3.5.3.5. Bottom Right Quadrant, Cost and Schedule.

The bottom right quadrant contains the Rough Order of Magnitude (ROM) and Schedule, Products and Deliverables, and Corporate Contact Information. ROM and Schedule shall be proposed by phase and include the cost, period of performance (POP), and exit criteria for each phase. A total cost and POP that combines all phases shall also be included. Products and Deliverables shall include, by phase, a list of all prototype hardware and software along with the required data as described in "Product and Deliverable Requirements" in section 2 of this document. Corporate Contact Information shall include the submitter's company name, point of contact, phone number, and e-mail address. Include any significant teaming partner (contact information) relevant to the evaluation. (Note that the contact information in the BIDS registration is used for all notices and contact purposes.)

3.5.4. Phase 1 Notification to Offeror.

The Government will notify the offeror when a submission has been accepted or rejected. Notification of acceptance with a request to submit the next phase document will be e-mailed to the offeror's contracting authority as entered in the BIDS registration and will indicate the next submission type, clarification requests, and due date and time. Likewise, rejection notifications will be e-mailed to the address provided in the BIDS registration. Debriefings for Quad Charts will not be conducted due to the nature of BAAs. In general, submissions are not considered for further review when they do not meet the basic requirement, are too costly, or do not fit the mission.

3.5.5. Phase 1 Status and Inquiries.

Phase 1 is complete when all submissions have been accepted or rejected in accordance with this BAA. Inquiries by phone concerning the status of Quad Charts will not be accepted. After login to the BIDS website, submitters are able to check the status of their submission(s) under **My Submissions**.

3.6. Phase 2 White Paper Submissions.

Offerors shall prepare and upload a White Paper with no more than twelve (12) pages plus a cover page in response to Phase 2 of this BAA. All submission pages shall be 8 ½ by 11 inches, double-spaced with fonts no smaller than 10 point; all margins shall be one inch. Each page of the submission shall contain the document identifier in the document header. If the White Paper contains more than 12 pages including tables, charts, and figures only the first 12 pages will be evaluated. All White Paper submissions must include a cover page. The cover page template is provided at the BIDS website under [Downloads, Reference Documents, Document Format](#). Cover pages are excluded from the White Paper page count.

3.6.1. Phase 2 Due Date and Time.

All unclassified White Papers must be received electronically through BIDS no later than the due date and time specified in the notification e-mail. Likewise, classified submissions must be received by the same due date and time. Refer to the "Special Handling Procedures for Classified Information" in this document for instructions on classified submissions. BIDS does not allow proposals to be uploaded or classified placeholders to be created after the due date and time. Any proposal, regardless of classification, submitted by any other means, or that is late

will not be considered by the Government.

3.6.2. Electronic File Format.

The White Paper shall be submitted in Microsoft Office (Word or PowerPoint), or Adobe Acrobat (PDF – portable document format) format. ZIP files and other application formats are not acceptable. The document must be print-capable, without password, and no larger than 500 kB. Filenames must contain the appropriate filename extension (.doc, .ppt, or .pdf). Filenames cannot contain spaces or special characters. Apple/Macintosh users must ensure the entire filename and path are free of spaces and special characters. Submissions that cannot be opened, viewed, or printed will not be considered.

3.6.3. Phase 2 Document Upload.

To upload a next phase document use the link back to BIDS provided in the acceptance e-mail, or login to BIDS under **My Submissions** to open the accepted record. Select **Create Next Submission** and follow the instructions.

3.6.4. White Paper Content.

White Papers shall provide a description of the technical approach, the specific tasks and deliverables by phase, schedule and cost estimate by phase, intellectual property and government rights, transition planning for production, and a capability statement. The offeror shall incorporate all clarification data requests from the acceptance e-mail into the submission. Indicate clarification entries by footnote and reference the requested item(s) in the footer area. The following White Paper sections and details are required.

3.6.4.1. Technical Approach.

Describe the proposed solution relative to the requirement. Focus content on operational capabilities required to address the problem, the underlying theory that supports the operational capability, and suggested concept of operations. Identify end users that could be interested in the proposed solution and describe how the solution will be a benefit. Include drawings, diagrams, charts, and tables needed to explain the effort. Describe if, and where, the proposed technology/solution has been, or is being used. Identify sponsoring agency and funding resources; or if none, so state.

3.6.4.2. Tasks and Deliverables.

Identify the proposed tasks by phase in the order of occurrence. A phase must have clear exit criteria to serve as a “go” or “no-go” decision point to proceed to the next phase. Identify work that will be performed by other organizations or agencies. Identify anticipated technical risks along with planned mitigation efforts. Indicate any Government furnished material (GFM), equipment (GFE), or information (GFI) that will be required with the task and need date; or if none, so state. For each phase include the exit criteria and all products and deliverables as defined in “Product and Deliverable Requirements” in section 2 of this document. If a phase is proposed as an option, so state.

3.6.4.3. Schedule.

Develop a master project schedule preferably in Gantt chart format. The schedule shall indicate the planned start and stop point for each phase with top level subordinate tasks, estimated delivery dates, and completion dates. Indicate the total project period of performance in months using January 2nd as a notional start date through the completion date.

3.6.4.4. Cost.

Provide the proposed, task-phased budgetary estimate inclusive of any proposed options. At a minimum, this estimate shall detail estimated labor hours and costs, anticipated material costs, product and deliverable costs (see section 2 General Information, “Product and Deliverable Requirements” in this document) and other costs (e.g., subcontracts, indirect

rates, fee rate) for each phase/task. Costs allocated to other organizations (e.g., Government testing) shall be clearly shown; or if none, so state. Changes in cost greater than 10% from those proposed in the prior submission shall be explained.

3.6.4.5. Intellectual Property, Technical Data, and Software.

Disclose/discuss all anticipated intellectual property, technical data, and/or software rights. See section 2 General Information, "Submission Handling/Rights in Technical Data and Computer Software/Patent Rights" in this document.

3.6.4.5.1. Patents and Patent Applications.

Identify any existing, applied for, or pending patents that will be used in the conduct of this effort. Provide Patent number or application number and title. Any patent that resulted from prior government funding should be identified. If no patents or patent applications are relevant, so state. See section 2 General Information, "Submission Handling/Rights in Technical Data and Computer Software/Patent Rights" in this document.

3.6.4.5.2. Rights in Technical Data and Software.

Identify any technical data and/or computer software that will be delivered with less than unlimited rights as prescribed in DFARS 252.227-7013 and DFARS 252.227-7014. If unlimited rights in technical data are proposed, so state. See section 2 General Information, "Submission Handling/Rights in Technical Data and Computer Software/Patent Rights" in this document.

3.6.4.6. Transition from Prototype to Production.

Describe the overall strategy to transition the results of this development effort to production once the funded effort is concluded. Briefly describe the overall strategy for transition, potential partners, transition issues to include any obvious regulatory, liability, interoperability, or financing issues. Discuss the interaction with representative users and the concept for test and evaluation by those users and follow on support of a product resulting from this effort.

3.6.4.7. Organizational Capability Statement.

Describe the offeror's capability and/or experience in doing this type of work. Identify technical team members or principal investigators and associated expertise. If applicable, include a description of co-participants' capabilities and/or experience. State whether an agreement has been reached (or not) with the co-participants.

3.6.5. Phase 2 Notifications to Offeror.

The Government will notify the offeror when a submission has been accepted or rejected. Notification of acceptance with a request to submit the next phase document will be e-mailed to the offeror's contracting authority as *entered in the BIDS registration* and will indicate the next submission type, clarification requests, and due date and time. Likewise, rejection notifications will be e-mailed to the address provided in the BIDS registration. **Debriefings for White Papers will not be conducted due to the nature of BAAs.** In general, submissions are not considered for further review when they do not meet the basic requirement, are too costly, do not fit the mission, or funding is not expected.

3.6.6. Phase 2 Status and Inquiries.

Phase 2 is complete when all submissions have been accepted or rejected in accordance with this BAA. Inquiries by phone concerning the status of White Papers will not be accepted. After login to the [BIDS website](#), submitters are able to check the status of their submission(s) under **My Submissions**.

3.7. Phase 3 Full Proposal Submissions.

Offerors shall prepare and upload technical Full Proposal with a separate detailed cost proposal in response to Phase 3 of this BAA. All pages shall be 8 ½ by 11 inches, double-spaced with fonts no smaller than 10 point; all margins shall be one inch. Each page of the submission shall contain the document identifier in the document header. The technical portion must be no more than 50 pages including tables, charts, and figures. If the document contains more than 50 pages, only the first 50 pages will be evaluated. All paragraphs containing proprietary information must be clearly marked. The cover page and the detailed cost proposal are excluded from the Full Proposal page count.

Disclaimer - To minimize the cost and effort for submitters, Phase 3, Full Proposals, will only be requested for qualifying solutions that have a high probability of award; however, the Government reserves the right to cancel any request for proposal for this solicitation prior to award.

3.7.1. Phase 3 Due Date and Time.

All unclassified Full Proposals must be received electronically through BIDS no later than the due date and time specified in the notification e-mail. Likewise, classified submissions must be received by the due date and time. Refer to the "Special Handling Procedures for Classified Information" in this document for instructions on classified submissions. BIDS does not allow proposals to be uploaded or classified placeholders to be created after the due date and time. Any proposal, regardless of classification, submitted by any other means, or that is late will not be considered by the Government.

3.7.2. Electronic File Format.

The Full Proposal shall be submitted in Microsoft Office (Word or PowerPoint), or Adobe Acrobat (PDF – portable document format). The cost proposal may be submitted in Microsoft Office (Excel) format. ZIP files and other application formats are not acceptable. The document must be print-capable, without password, and no larger than 500 kB. Filenames must contain the appropriate filename extension (.doc, .ppt, .xls, or .pdf). Filenames cannot contain spaces or special characters. Apple/Macintosh users must ensure the entire filename and path are free of spaces and special characters. Submissions that cannot be opened, viewed, or printed will not be considered.

3.7.3. Phase 3 Document Upload.

To upload a next phase document, locate and open the accepted record in BIDS and select **Create Next Submission**.

3.7.4. Full Proposal Components.

Full Proposals shall consist of two major sections described in this document, and can be uploaded to BIDS in two separate files each limited to 500 kB each. The first section is the Technical Proposal and shall include all technical information related to the proposal including figures, charts, and tables plus the cover page. Second is the Cost Proposal to include all cost data as well as an explanation of changes in cost greater than 10% from those proposed in the prior submission.

3.7.5. Technical Proposal Content.

The Technical Proposal shall provide a technically detailed solution of the problem addressed in the requirement and fully expand the technology proposed in the prior submission. The following sections and associated data are required. The offeror shall incorporate all clarification data requests in the acceptance e-mail. Indicate clarification entries by footnote and reference the requested item(s) in the footer area.

3.7.5.1. Cover Page.

A cover page template is provided at the BIDS website under **Downloads, Reference Documents, Document Format**. The cover page includes necessary contractual information including the offeror's contracting point of contact (name, telephone number, e-

mail address, facsimile number, mailing address) and business information (Data Universal Numbering System (DUNS) number, business type). Include the proposed contract type, total cost, and the duration of all phases/tasks. Cover pages are excluded from the page count.

3.7.5.2. Abstract.

The abstract is a one page (or less) synopsis of the proposal that includes the title and the basic approach to satisfy the requirement. Describe the overall scope of work to be performed for the entire period of performance inclusive of options. The abstract shall stand-alone and be suitable for release under the Freedom of Information Act, 5 U.S.C. 552, as amended.

3.7.5.3. Executive Summary.

An executive summary is a concise description of the technology and solution being proposed. Include key information that demonstrates how the proposed solution meets the published requirement. The executive summary should not introduce any new information not covered in the subsequent content.

3.7.5.4. Technical Approach.

Describe the technical approach for the proposed solution to meet the requirement. Include technical details of the solution and fully expand the technology proposed in the prior phase submission. Include the methodology, underlying theory, system components, and operational scenario for the intended users. Include drawings, diagrams, charts, and tables needed to explain the effort. Describe relevant prior application of the proposed technology and/or solution, how it is being used, and by whom. Identify sponsoring agency and funding resources; or if none, so state.

3.7.5.5. Project Plan.

The project plan shall be organized by phase and describe the work to be performed along with all associated requirements to successfully complete the proposed effort. Include a summary of the individual phases to follow.

3.7.5.5.1. Phases.

Phases shall be defined by the subset of tasks to be performed, phase objectives to be accomplished, and the required period of performance to completion. Phases shall be listed in order of occurrence. Identify phases that are optional. Each phase must contain clear exit criteria that is measurable evidence of completion and serves as a "go" or "no-go" decision point. Each phase shall include a total cost.

3.7.5.5.2. Tasks within a Phase.

For each task, provide a detailed description of the work to be performed. Identify any work that will be performed by other organizations or agencies; or if none, so state. Indicate if an agreement is in place for the resources.

3.7.5.5.3. Products and Deliverables.

Identify all deliverables - products as well as documentation and reports - for each Task/Phase. Refer to section 2 of this document "Product and Deliverable Requirements" for the minimum report requirements, and additional products and deliverables in performance of the effort proposed.

3.7.5.6. Master Schedule.

Develop a master project schedule that includes phase start and stop dates as well as major milestones, critical tasks, and report and product delivery dates. Assume a start date of January 2nd. Indicate any optional phases.

3.7.5.7. Government Furnished Equipment.

Identify all Government furnished equipment, materials, facilities, or information with the need date and suggested source. If Government equipment, materials, facilities, or information are not required, so state.

3.7.5.8. Project Risks and Mitigation.

Identify anticipated technical and management risks along with planned mitigation efforts. Indicate the risk assessment as high, medium, or low.

3.7.5.9. Organizational Capability Statement.

Include a brief description of the offeror's organization. Describe the offeror's capability and/or experience in doing the type of work being proposed. If applicable, include a description of co-participants' capabilities and/or experience. State whether an agreement has been reached with the co-participants. Provide at least three references, to include points of contact, for like or similar work.

3.7.5.10. Organizational Resources.

Identify key technical personnel and principal investigator(s) including alternates and co-participants, if applicable. Include a brief biography, relevant expertise, and a list of recent publications for each. Identify any team members with potential conflicts of interest. Possible conflicts of interest include personnel formerly employed by the federal Government within the past two years from the date of proposal submission. Provide name, duties, employing agency, and dates of employment; or if none, so state.

3.7.5.11. Intellectual Property, Technical Data and Software.

All anticipated intellectual property, technical data or software rights shall be disclosed. See section 2 General Information, "Submission Handling/Rights in Technical Data and Computer Software/Patent Rights" in this document.

3.7.5.11.1. Patents and Patent Applications.

Identify any existing, applied for, or pending patents that will be used in the conduct of this effort. Provide Patent number or application number and title. Any patent that resulted from prior government funding should be identified. State if no patents or patent applications are relevant.

3.7.5.11.2. Rights in Technical Data.

Identify any technical data and/or computer software that will be delivered with less than unlimited rights as prescribed in DFARS 252.227-7013 and DFARS 252.227-7014. State if unlimited rights in technical data are proposed.

3.7.5.12. Transition from Prototype to Production.

Describe the approach and issues related to transition or commercialization of the results of this effort to an operationally suitable and affordable product for the intended users to include the following. A Transition Plan should be included in the proposed costs.

3.7.5.12.1. Transition Strategy.

Provide the overall strategy for transition to production (licensing, partnering, or venturing) along with the associated timelines for actions associated with the transition. Describe the roles of current development partners, subcontractors, or other organizations that will be leveraged. If the offeror is not a commercial entity, indicate if a commercial partner has been identified. Discuss barriers to commercialization, such as anticipated regulatory issues (such as environmental, safety, health, and transportation), liability issues, interoperability, and financing, and planned steps to address these barriers.

3.7.5.12.2. Transition Approach.

Describe the type and level of effort envisioned to take the technology from its state at the end of the development effort to a production ready, affordable, operationally suitable product (such as size and/or weight reduction, packaging, environmental hardening, integration, additional test and certification). Provide an estimate of any costs to transition the prototype to low rate initial production. Provide the estimated production unit price for the end users.

3.7.5.12.3. Test and Evaluation.

Describe the plan to involve representative users during the design and development process and the general plan for test and evaluation by representative end users.

3.7.5.12.4. Operational Support.

Describe the estimated level of training needed to prepare users to utilize the product in an operational environment. Discuss the anticipated support concept such as level(s) of repair, spare parts, warranties, operation and maintenance technical manuals, simulators, and other logistics considerations.

3.7.5.13. Human Subjects and Animal Testing.

The proposal shall provide a statement regarding the anticipated use of human subjects or animals in testing; or if none, so state. If yes, procedures for complying with all laws and regulations governing the use of animals or human subjects in research projects shall be included in the technical proposal. See section 2 General Information, "Animal or Human Testing Compliance" in this document for details.

3.7.5.14. Environmental Impact.

The proposal shall provide a statement regarding the impact of the work proposed on the environment. State if no impact exists.

3.7.5.15. Classification and Security.

If the offeror is proposing to perform research in a classified area, indicate the level of classification of the research and the level of clearance of the potential principal investigator and all proposed personnel. The contractor shall include facility clearance information. Also, the contractor shall indicate the Government agency that issued the clearances. State if the proposed effort is unclassified.

3.7.5.16. Subcontracting Plan.

If the total amount of the proposal exceeds \$500,000 and the offeror is not a small business, the offeror shall submit a subcontracting plan for small business and small socially and economically disadvantaged business concerns. A mutually agreeable plan will be included in and made a part of the resultant contract. The contract cannot be executed unless the contracting officer determines that the plan provides the maximum practicable opportunity for small business and small disadvantaged business concerns to participate in the performance of the contract. The Subcontracting Plan/information is excluded from page count.

3.7.6. Cost Proposal.

The offeror shall prepare and submit cost or pricing data, and supporting attachments in accordance with Table 15-2 of FAR 15.408. Submission of the Cost Proposal in Microsoft Office (Excel) format expedites processing by the reviewers. As soon as practicable after agreement on price, but before contract award, the offeror shall submit a Certificate of Current Cost or Pricing Data as prescribed by FAR 15.406-2 for cost type contracts exceeding \$650,000.

3.7.6.1. Cost Summary.

Provide a summary of the total cost for each phase and the total for the entire effort proposed. Indicate optional phases. Explain changes in cost greater than 10% from those proposed in the previous submission.

3.7.6.1.1. Other Funding Sources.

The proposal shall provide the names of other federal, state, or local agencies, or other parties receiving the proposal and/or funding or potentially funding the proposed effort. State if no other funding sources or parties are involved.

3.7.6.2. Detailed Cost Estimate.

Provide, in table format, a detailed cost breakdown by phase, of all items identified in the technical portion of the proposal for the following cost elements. Include all options.

3.7.6.2.1. Direct Labor.

Provide a list of the applicable labor categories or positions showing the breakdown of labor hours, rates, cost for each category, and furnish the basis for the estimates. Clearly indicate fiscal year rate changes and associated labor rate escalation calculations as applicable.

3.7.6.2.2. Indirect Costs.

Indicate how the offeror has computed and applied offeror's indirect costs. Indicate the rates used and provide an appropriate explanation.

3.7.6.2.3. Other Costs.

List all other costs not included in other sections (e.g., special tooling, travel, computer and consultant services, preservation, packaging and packing, spoilage and rework) and provide the basis for pricing.

3.7.6.2.4. Materials.

Provide a consolidated price summary of individual material quantities included in the various tasks and the basis for pricing (such as vendor quotes and invoices). Include new materials, parts, components, assemblies, and services to be produced or performed by others. For all items proposed identify the source, quantity, and price. Upon request, the offeror shall provide all backup and source data used for the basis for pricing.

3.7.6.2.5. Government Furnished Equipment.

List the property or materials required to perform the task. Separate items to be acquired with contract funds and those to be furnished by the Government. When possible, the description or title and estimated or known unit and total costs of each item should be shown (i.e., manufacturer, catalog price, or previous purchase price). When such information on individual items is not available, the items should be grouped by class and estimated values indicated. In addition, the offeror shall include a statement as to why it is necessary to acquire the property with contract funds, and if applicable, express in writing his unwillingness or financial inability to acquire the items with his own resources. NOTE: The FAR generally prohibits providing an industrial contractor with facilities (including plant equipment and real property) with a unit acquisition cost of less than \$10,000.

3.7.6.2.6. Fee.

Include the fee proposed for this effort. State if no fee is proposed.

3.7.6.2.7. Competitive Methods.

For those acquisitions (e.g., subcontract, purchase orders, material orders) over \$100,000 priced on a competitive basis, also provide data showing degree of competition and the basis for establishing the source and reasonableness of price. For inter-organizational transfers priced at other than cost of the comparable competitive commercial work of the division, subsidiary, or affiliate of the contractor, explain the pricing method (See FAR 31.205-26(e)).

3.7.6.2.8. Established Catalog or Market Prices/Prices Set By Law or Regulation.

When an exemption from the requirement to submit cost or pricing data is claimed, whether the item was produced by others or by the offeror, provide justification for the exemption.

3.7.6.2.9. Noncompetitive Methods.

For those acquisitions (e.g., subcontract, purchase orders, material orders) over \$650,000 priced on a noncompetitive basis, provide certified cost or pricing data showing the basis for establishing the source and reasonableness of price. For standard commercial items fabricated by the offeror that are generally stocked in inventory, provide a separate cost breakdown if price is based on cost. For inter-organizational transfers priced at cost, provide a separate breakdown of cost by elements.

3.7.6.2.10. Royalties.

If more than \$250 provide the following information on a separate page for each separate royalty or license fee:

- Name and Address of Licensor
- Date of the License Agreement (*See Note 1 below.*)
- Patent numbers, Patent Application Serial Numbers, or other basis on which the royalty is payable
- Brief description (including any part or model numbers of each contract item or component on which the royalty is payable)
- Percentage or dollar rate of royalty per unit
- Unit price of contract item
- Number of units
- Total dollar amount of royalties

Note 1: A copy of the current license agreement and identification of applicable claims of specific patents shall be provided upon request by the contracting officer. See FAR 27.204 and FAR 31.205.37.

3.7.6.2.11. Facilities Capital Cost of Money.

When the offeror elects to claim facilities capital cost of money as an allowable cost, the offeror must submit Form CASB-CMF and show the calculation of the proposed amount. See FAR 31.205-10.

3.7.7. Phase 3 Notifications to Offerors.

Notification of acceptance or rejection of a Phase 3 submission will be sent via e-mail to the offeror's principal contact as entered in the BIDS registration. If the Government does not accept the Phase 3 proposal, the offeror may request a formal debriefing in accordance with FAR 15.5.

3.7.8. Phase 3 Status and Inquiries.

Phase 3 is complete when the Government concludes technical evaluations of all submissions and awards any contracts considered under this BAA. Inquiries by phone concerning the status of Full Proposals will not be accepted. After login to the BIDS website, submitters are able to check the status of any submission under **My Submissions**.

4. PROPOSAL EVALUATION.

4.1. Objective.

The CTTSO conducts rapid prototype development focused on critical multi-agency and future threat counterterrorism and antiterrorism requirements. The primary mission is to conduct the National Interagency Research and Development (R&D) Program for combating terrorism through rapid research, development, and prototyping. The program objectives are to provide an interagency forum to coordinate R&D requirements for combating terrorism, to sponsor R&D not otherwise being addressed by individual agencies, and to promote information transfer among the participating agencies.

4.2. Evaluation Criteria.

The criteria used to evaluate and select proposals for projects are described as follows. Each proposal will be evaluated on its own merit and relevance to the program requirements rather than against other proposals in the same general research area.

4.2.1. Basic Requirement.

The proposed solution must meet the letter and intent of the stated requirement; all elements within the proposal must exhibit a comprehensive understanding of the problem and the requirements of intended end users. The proposed solution must meet multiple user (U.S. Government or commercial) needs and be fully compliant with all elements of the solicitation including format, content, and structure as well as all BAA instructions.

4.2.2. Cost.

The proposed costs must be both reasonable for the work proposed and achievable. The proposal must document all anticipated costs including those of associate, participating organizations. The proposal must demonstrate that the offeror has fully analyzed budget requirements and addressed resulting cost risks. The proposal must indicate all cost-sharing and leveraging opportunities explored and identified and the intellectual property expectations associated with that cost-sharing. Other sponsors who have funded or are funding this offeror for the same or similar efforts must be identified by agency, program manager name, phone number and e-mail address.

4.2.3. Schedule.

The proposed schedule must be reasonable, achievable, and complete. The proposal must indicate that the offeror has fully analyzed the project's critical path and has addressed the resulting schedule risks.

4.2.4. Technical Performance.

The proposed technical approach must be feasible, achievable, complete, and supported by a proposed technical team that has the expertise and experience to accomplish the proposed tasks. Task descriptions and associated technical elements are to be complete and in a logical sequence. All proposed deliverables must clearly define a final product that meets the requirement and can be expected as a result in the award. The proposal must identify and clearly define technical risks and planned mitigation efforts. Those risks and the associated mitigation must be defined, feasible and reasonable. The roles of the prime and other participants required must be clearly distinguished and pre-coordination with all participants (including Government facilities) fully documented. The requirement for and the anticipated use or integration of GFM including all equipment, facilities, and information, must be fully described including dates when such GFM will be required. Intellectual property ownership and the planned transition to production must be adequately addressed, including a support concept for the product described. Similar efforts completed by the offeror in this area must be fully described including identification of other Government sponsors.

4.2.5. Contractor Past Performance.

The offeror's past performance in similar efforts must clearly demonstrate an ability to deliver products that meet the proposed technical performance requirements within the proposed budget and schedule. The proposed project team must have demonstrated expertise to manage the cost, schedule and technical aspects of the project.

5. TECHNOLOGY DEVELOPMENT REQUIREMENTS AND OBJECTIVES.

CTTSO is interested in proposals in the following areas of combating terrorism. The intent of this BAA is to identify technologies and approaches that provide near-, mid-, and long-term solutions that enhance the capabilities of the U.S. Government to combat or mitigate terrorism. The level of detail and order of appearance for a given requirement are not intended to convey any information regarding relative priority.

5.1. Chemical, Biological, Radiological, and Nuclear Countermeasures - CBRNC (CB)

Mission: Identify, prioritize, and execute projects that satisfy Department of Defense (DoD), interagency, state, and local user requirements to counter the terrorist employment of improvised chemical, biological, radiological, and nuclear (CBRN) materials.

2278 Handheld Biological Detector

Develop a handheld detector to help CBRN responders quickly determine the spread of biological agent contamination for both indoor and outdoor releases. The system must be a small, robust package approximately 12 inches (length) by 12 inches (height), with a thickness not to exceed 6 inches, and shall fit into a small back pack (e.g., tactical three-day assault back pack) for storage and transportation. The initial agent of concern shall be *Bacillus anthracis* with capability to add additional bacterial agents as an option. The detector shall be able to run on commercial batteries and be easy to operate. A capability to hot-swap batteries is required. Sample processing time shall not exceed 10 minutes (threshold) with 5 minutes (objective). Reagents, if used, shall be relatively low cost (less than \$2 per test), and reagents for 100 tests of one agent must fit in the back pack. While long term storage of reagents in a refrigerator is acceptable, the reagents should remain usable for at least 48 hours at ambient conditions in the field after issue for use. Expected sample types are swabs. The system must provide specificity and sensitivity comparable to polymerase chain reaction (PCR) levels of detection. The detector shall allow the user to download data easily. Data files must be less than 50 kB to send via e-mail to reach-back capabilities. Total system weight including batteries, spare battery pack, and reagents for 100 tests shall not exceed 15 pounds.

2280 PPE Decontamination Procedure and Test Method

Develop effective procedures to biologically decontaminate (Biodecon) Personal Protective Equipment (PPE) and a standardized biological aerosol test method (BATM) to measure and validate surface sterility of the PPE to allow for the reuse during a health emergency (e.g., pandemic influenza or wide-spread biological attack). Initial focus shall be on developing procedures for National Institute for Occupational Safety and Health (NIOSH) approved disposable particulate respirators (e.g., N95 masks). Simple, reliable procedures to biologically decontaminate PPE for reuse are required by military, police, fire, first responders, and health care workers. Current procedures exist for general surface decontamination of biological agents; however, such procedures are typically harsh and may compromise the integrity of the PPE device. The developed procedures must kill the microorganism, be harmless to the PPE device, and pose no risk to the user. A prerequisite for developing Biodecon procedures is the development of a standardized (e.g., through American Society for Testing and Materials (ASTM)) and validated BATM that provides a representative challenge that can ensure satisfactory performance of the Biodecon procedures. Biological aerosols, which provide the most appropriate challenge, are complex (particle size, microbial protective factors, microbe concentration, agglomeration, etc.) and vary among different threat conditions (biological attack, pandemic influenza outbreak, viruses, spores, vegetative bacteria, etc.). The standardized BATM and Biodecon procedures shall be applicable for both civilian and military users and shall undergo rigorous peer review.

2281 Multipurpose Threat Glove

Develop, design, and deliver prototype multipurpose gloves for use by public safety officers, Urban Search and Rescue (USAR) teams, and the DoD to provide protection from cut, puncture, and pathogen threats (blood and biocontaminated liquids) while performing routine tasks including, but not limited to physical searches of persons (e.g., pat-downs), searches into “blind” areas (e.g., behind/under car seats, purses, pockets, between mattress/box spring, etc.), evidence collection and analysis (including drugs, biohazard, and blood), traffic stops, lighting and setting flares, and writing. The gloves shall have cut-, puncture-, and pathogen-resistance (consistent with requirements in applicable NFPA Standards, ASTM Standard Test Methods, NIJ Test Protocol 99-114, etc.) to include protection against hypodermic needles. Wearer must be able to “feel” potentially illicit objects while performing pat-downs (e.g., guns, knives, pills, needles, plastic baggies, handcuff keys, etc.). The gloves shall be slip-resistant to allow the wearer to perform routine tasks such as firing a weapon, handling a flashlight, and driving a vehicle, as well as thin and pliable enough to allow performance of routine tasks requiring manual dexterity (e.g., writing, typing on a laptop computer, operating buttons/switches associated with vehicle and standard equipment, etc.). Gloves shall resist degradation over time and remain operational in extreme temperatures, humidity, salinity, and UV conditions. Gloves shall be machine washable and must be able to be sanitized on-site after exposure to a pathogen and reused. Gloves shall be “breathable” to facilitate extended use and available in at least six sizes. Other desired characteristics and capabilities include abrasion-resistant and material thickness that allows the gloves to be used as “inserts” to cold-weather gloves. The gloves shall interface and be compatible with existing commercial and military issued duty uniforms. The gloves shall be compatible with civilian and military firearms.

2284 Standoff Patient Triage

Develop a handheld emergency response triage device to assist personnel wearing Class I/Level A, B, or firefighting personal protective equipment (PPE) in determining whether a victim is alive or dead from a threshold distance of 5 feet and an objective distance of 40 feet. The device shall rapidly detect status of the victim in less than 30 seconds. Device must be ruggedized for use in an austere environment as well as resistant to adverse environments. At a minimum, the device shall be water resistant, rechargeable, battery powered, cordless, and capable of rapidly assessing heart rate and respiratory rate in a hazardous materials environment. The battery life shall be at least four hours with hot-swappable battery capabilities. The standoff capability for patient triage allows responders to sort and prioritize appropriate victims for rescue/extraction to the decontamination and medical treatment areas. Device shall not require patches or other objects connected to the patient. The device shall be handheld, easily transportable, accurate and reliable. The device shall be rugged, operate after repeated cycles of vibration (as would be experienced in day to day fire apparatus responses), and shall be able to withstand a drop onto concrete from a height of five feet. The device shall be easy to use, require minimal maintenance, and be self-calibrating. Recommended data interpretation techniques shall be provided. Buttons must be large enough to be operable by double gloved personnel in Level A PPE. Visual or audible indicators shall be observable by personnel in Level A PPE. If colored lights or other indicators are used to indicate if patient is Red, Yellow, Green, or Black triage color – then criteria for logic used to determine color must be re-programmable by the user. Device shall be capable of complete decontamination when personnel exit the contaminated atmosphere. Device shall cost no more than \$20,000. Use of the device shall not cause harm to the patient.

2310 Electronics Integration Platform for CBRN PPE

Develop an electronics integration platform and specification for integrating different sensors or other electronic devices in the chemical, biological, radiological, and nuclear (CBRN) personal protective equipment (PPE) ensemble with data communicated directly to the user and/or wirelessly to a central base station. The purpose for the development of this platform is to establish the industry standard for how electronic devices are integrated into protective ensembles, permit innovative approaches for sensor and other electronic systems wearable as part of the protective ensemble, and to establish the power supply and user interface

specifications that allow efficient integration of different electronic systems. The integration platform shall be lightweight (less than one pound) and wearable by the first responder during normal operations including hazardous materials, special weapons, and tactics; Explosive Ordnance Disposal (EOD) operations; structural fire fighting; and search and rescue. The system shall not interfere with operations and shall be independent of the protective ensemble worn. The system design should anticipate a variety of end user interfaces for conveying information to the wearer. Ensemble electronics are expected to include wireless communications, Global Positioning System (GPS) and tracking, environmental sensing, and physiological monitoring systems. The platform shall minimize weight, space, heat, and power requirements and not burden the wearer. Electromagnetic emissions of the integration platform shall be minimized. Materials of construction and design shall be selected to keep fire, chemical, and snag hazards to a minimum. The integration platform shall be intrinsically safe.

2311 Tactical Law Enforcement Respiratory Protection Mask

Develop a low-profile tactical law enforcement respiratory protection mask used by tactical law enforcement officers while performing routine tasks in which there is a suspicion of a chemical, biological, or radiological hazard. The system shall enable the user to sight and operate weapons with both optical sights and iron sights (e.g., handguns, long guns), and shall integrate with ensemble hoods, ballistic helmets, communications equipment (e.g., radios, etc.), and weapons. The mask shall protect the user from potential environmental, respiratory, and physical hazards (i.e., flash from fire and impact [ANSI Z87 standard or better]). The weight of the face piece (not including filtration canisters, SCBA hoses, tanks) shall not exceed one pound and shall allow wearers to drink (hydrate) while wearing the system, even while in a "hot" zone. The mask shall be compatible with a positive pressure SCBA (self-contained breathing apparatus), APR (air purifying respirator), and/or a PAPR (powered air purifying respirator). The system shall display the amount of remaining air supply and use a low visual profile that does not light the face or cause a reflective glare (for covert/stealth missions). The mask shall allow physical apprehension of suspects with minimal risk of the face piece being removed. The face piece lens shall have the following attributes: antifog, scratch-resistant, built-in UV protection (but not be tinted) and shall be available in multiple sizes to include a fit kit. The mask shall have a maximum field of view (a minimum average visual field score of 90 (in accordance with NIOSH Standard for a CBRN Full Face piece APR)) and accept optical inserts for corrective lenses or have visual correction built into the lens of the face piece. An internal microphone (or comparable technology) shall be incorporated and be connected to both an intrinsically safe voice-activator and to others via radio system. Minimized noise levels for covert/stealth missions (inhalation/exhalation of SCBA systems, audible "low air" alarms, etc.) are desirable. The system shall be able to be stored over extended periods of time (minimum of five years shelf life) and under extreme temperature, humidity, salinity, and UV conditions. Developer must coordinate with respiratory standards organizations to ensure that equipment will be "certifiable" to national standards.

2312 Homemade Explosive Materials Clean-Up Kit

Develop a self-contained kit for containing the chemicals specific to the Homemade Explosive Materials (HME) threat to minimize the secondary threat of chemical releases into the environment. The emphasis shall be on strong oxidizing reagents such as permanganates, perchlorates, and hydrogen peroxide and peroxide-based explosives to include triacetone triperoxide (TATP). The kit must be portable, contained within a sealed case, simple to use, and inexpensive. The kit shall be capable of handling materials found in a clandestine laboratory, materials removed from an improvised explosive device, or the materials dispersed after use of common bomb squad/EOD disrupters. The materials contained within the kit (e.g., sorbents, HAZMAT absorbent pads, drop cloths, etc.) shall have a long shelf life (minimum of five years required). The kit shall contain a bag suitable for storing the contaminated product for disposal. The entire kit and case shall be no larger than 30 inches by 18 inches by 12 inches. The kit shall weigh no more than 15 pounds. The initial kit cost shall be no greater than \$250 with refill components costing no greater than \$100.

000-CB Unspecified Requirement CB

New or improved technologies or emerging technological capabilities pertaining to Chemical, Biological, Radiological, and Nuclear Countermeasures (CBRNC) that may be of interest to TSWG, but were not specifically requested in this BAA and are not commercially available. Future interests must be timely, relevant, and further the global war on terrorism. Medical applications (vaccines, pharmaceuticals, clinical diagnostics, and syndromic surveillance systems) and battlefield applications are not desired. These areas and other areas that do not directly relate to CBRN countermeasures will be rejected without consideration or comment. Areas of interest include:

- Personal protective equipment to include respiratory and percutaneous chemical, biological, or radiological protection (gloves, suits, or boots) that can be worn as part of the normal duty uniform or rapidly donned at the first sign of an incident;
- Equipment for law enforcement, emergency medical technicians, veterinarians, and public utility workers is of particular interest; and
- Standoff detection of clandestine laboratories.

Unspecified requirements (R000) are for proposing unique innovations that have not yet been identified by TSWG. Submissions against a particular subgroup's unspecified requirement should be relevant to that subgroup's mission. TSWG does not budget for unspecified requirements. If the evaluation team determines that an unspecified requirement submission is promising enough to merit pursuing, funds will be identified at that point. Because proposed technologies from the unspecified requirements will be competing against proposed technologies for identified and prioritized interagency requirements, TSWG may not be able to make any awards against the unspecified requirements.

5.2. Explosives Detection (ED)

Mission: Identify, prioritize, and execute projects that satisfy interagency requirements for existing and emerging technology in explosives detection and diagnostics. Emphasis is on long-term, sustained approaches leading to new and enhanced technology for detection and identification of improved explosive devices and large vehicle bombs.

2274 Vapor Standards for Validation of Explosives Trace Detectors

Develop and support a manufacturable Quality Control Validation Kit that can deliver trace vapor standards to vapor-based Explosives Trace Detection (ETD) systems for performance verification at laboratory and operational sites. This delivery system should pose no safety issues to personnel operating it.

Prefer system(s) emit non-explosive vapor standards such that their detection by the vapor-based ETDs does not interfere with the detection of explosives (i.e., should an explosive vapor also be present, both can be individually detected). The system must be able to deliver vapor standards in a continuous or pulsed mode, and the concentration of each standard shall not exceed 0.4 pg/ml. The delivery flow rate of the system should have two settings, one at 60 ml/min and one at 240 ml/min. The flow rate should not be affected by the sampling mechanism of the ETDs. The system should have an operational life of 6 months in use and an unopened shelf-life of at least 12 months after manufacture. If electrical power is required, the system shall be operable with battery power and should also operate with AC power worldwide. The vapor generator should be compact, lightweight, and portable to permit its use to validate detection capability of handheld trace explosives detectors in the field for military and civilian security operations. The system should be affordable and easy to reload with chemical standards if the system is not designed as a disposable item. If multiple material standards are to be delivered using the same system, all components contacting the material to be delivered as vapor shall be designed to prevent contamination of one material type with another without a cleaning or bake-out process.

Systems should operate under austere conditions of environmental extremes including in the presence of fine particulate dust, a temperature range of 20 to 120 degrees Fahrenheit and a relative humidity range of 5 to 95 percent. If a white paper is requested, the submitter shall provide detailed calculations and/or experimental data to validate performance capabilities specified in the quad chart submission.

2275 Image Quality Enhancements for Improvement of Explosives Detection System Performance

Develop and apply tools and techniques for improving the spatial resolution of images taken by computed tomography (CT) X-ray systems certified by the Transportation Security Administration for screening of checked baggage. Assess the effectiveness of improved image quality and fidelity on probability of automated detection and false alarm rates for explosives and any improvement in subsequent on-screen alarm resolution effectiveness by system operators.

Both images taken by the developer and Government furnished X-ray images will be used in the study. Improved resolution in study images taken by the developer should result from techniques that increase the amount of information in the image, such as additional views in the CT slice plane, reduced belt speed, or use of X-ray systems with higher resolution than current TSA-certified X-ray explosives detection systems. The Government must have full data rights to all images and image improvement techniques developed under this study.

Image improvement techniques proposed should not reduce inspection throughput once deployed into checked baggage CT X-ray systems. Developers must conduct assessments of the image resolution improvement methods developed under this task before submitting them to the Government for final evaluation.

These tools, techniques, and results will be used for development of requirements for next-generation baggage screening systems and may be incorporated into existing baggage screening systems. Techniques for improvement that can be applied to systems from multiple manufacturers are preferred as are methods that can be applied to existing systems without major hardware modifications, downtime, or other impediments.

2276 Vehicle Borne Improvised Explosive Device Detection

Develop a system capable of detecting multiple classes of explosives in vehicles. This system is intended for screening of vehicles entering facilities including those in severe weather environments such as maritime (salt air), cold or hot weather, and heavy rain.

The system hardware must detect specific explosive compounds to identify threats within a vehicle's cargo to prevent a vehicle borne IED from being driven into a facility or boarded onto a vessel. The system must be capable of daily, multiple-shift use in a severe environment, and operate under extreme temperatures and weather conditions including maritime environments. The system should accommodate the full range of vehicle sizes from subcompact cars to large trucks as well as their cargo materials, and should be capable of interrogating all locations within a vehicle or its cargo compartment. The system should include an imaging capability to localize explosive threats and identify other contraband, but must not rely primarily on that capability for detection of explosives.

The system should have a small footprint, should be transportable over public roads (including roads that are unpaved or in poor condition), and should not require more than 24 hours set-up time or significant numbers of personnel to operate. During screening, it is desirable that the vehicle operator not be required to leave the vehicle.

The detection results, including any images produced, must be accessible from a remote location such as an operations center or security office. The system should be able to automatically identify areas within the vehicle or its cargo that contain a suspect device, and should provide an approximate location within the cargo so the alert can be resolved. Information collected by the system should be stored in and retrievable from a PC-based format. The information collected should include the date and time for each image and ensure the design efficiently uses the computer storage with no degradation or loss of any stored image or associated data. System operators should be able to add notes or comments to the information collected.

Offerors must provide estimates of the critical performance parameters for the solution proposed to include detection and false alarm probabilities, quantities and types of materials detected in cars and trucks, and vehicle throughput. In the event a white paper is requested, offerors will be asked to provide performance results or calculations to substantiate these estimates.

2277 Portable Suicide Bomber Detection

Develop, integrate, and build necessary hardware and software to detect suicide bombers, alert the operator of the detection, and identify the specific person determined to be the suicide bomber. The system must detect improvised explosive devices concealed on persons, should operate without the subject becoming aware that they have been evaluated and that a detection has occurred, and must clearly indicate the specific individual determined to be a suicide bomber or identified as a potential suicide bomber.

The system must be suitable for worldwide operation (including maritime and salt air environments), any time of the year, day and night, indoors and outdoors; must afford the operator a safe separation distance from the intended point of detection by either remote or standoff operation; must not pose a health risk to the general public, operators, or other mission personnel; including when emitting ionizing radiation, RF radiation, or high intensity light (laser).

The system must be portable or transportable by car or light truck, be wheeled or carried by no more than two persons to sites not directly accessible by vehicle, erected manually or

automatically by no more than two persons, should be ready to operate within 30 minutes of arrival at a site, and use any available commercial power, generators, or batteries. The system should be configured to facilitate discreet operation.

The system must be useable by any appropriate federal (military and civil), state, and local authority to accomplish real time confirmation of the presence of a suicide bomber with no more than eight hours of training. The system must include training manuals suitable for use with law enforcement, military force protection, and other personnel required to screen persons.

Offerers must provide estimates of the critical performance parameters of their systems, to include detection and false alarm probabilities, quantities and types of materials detected on the body, and screening throughput. In the event a white paper is requested, offerers will be asked to provide performance results or calculations to substantiate these estimates.

2317 Improved Sampling Systems for Explosives Trace Detection

Develop high volume advanced sampling technologies and prototype systems to efficiently deliver traces of explosives to detection systems. These advanced trace samplers should function with existing COTS explosives trace detection systems (ETDs). Technologies and systems should demonstrate improvements over current sampling techniques in speed, efficiency, and cost for screening of people and cargo. Innovative concepts in trace particle and vapor sampling are desired.

The sampling approach must be effective for collection of trace amounts of commercial explosives (including plastic explosives) and improvised (homemade) explosives with both low and high vapor pressures. The sampler would ideally be able to simultaneously collect both nanogram levels of explosive particles and parts per billion levels of vapors from explosives.

5.4. Investigative Support and Forensics - ISF (IS)

Mission: Identify, prioritize, and execute projects that satisfy interagency requirements for criminal investigation, law enforcement, and forensic science technology applications in terrorism related cases.

2025 Fingerprint Recovery from IEDs

Develop a method that will enhance the ability to detect latent fingerprints on improvised explosive devices (IEDs), system components, and post blast fragments that would otherwise go undetected because of heat degradation. Identify the daughter products of the fingerprint residues (both sebaceous and eccrine) that remain following degradation and design a method to visualize latent prints. Determine whether or not the new method is adversely affected or enhanced by cyanoacrylate fuming. Test the quality of the developed fingerprints with the new method against current methods of fingerprint development using cyanoacrylate, dye stain, and fluorescence exams. The Government will provide the post blast components needed for analysis.

2121 Proficiency Testing For Forensic Document Examination

Design, develop, and conduct comprehensive testing and validation processes for examinations performed by forensic document examiners (FDEs) on natural handwriting and disguised writings seen in terrorist-type investigations. The testing and validation processes must scientifically determine the error rates and performance of FDEs and laypersons in identifying and excluding specific writers of naturally written and deliberately disguised handwriting and handprinting in documents. The tested laypersons must demographically represent those persons who serve on criminal trial juries. The analysis and testing must determine the effects, if any, of the context of the documents on the examination conclusions reached by the FDEs. The testing and validation must also determine the proficiency, reliability, and error rates of FDEs in identifying and excluding the source of faxed documents which include the fax header. The processes must be consistent with the accepted and established professional practices and procedures performed by FDEs.

The testing and validation processes must meet all of the legal and admissibility standards of Daubert v. Merrell Dow Pharmaceuticals Inc., 509 U.S. 579 (1993), 43 F3d 1311 (9th Circuit, 1995), and the Federal Rules of Evidence. The final report must be sufficient for a judicial determination of all performed analyses during a Daubert/Kumho admissibility hearing. The final deliverable shall include a professionally written report including a full explanation and listing of the methodology, tests, summary of data, data samples, results, statistical tests, conclusions, and findings. The final report shall be the basis for a manuscript for publishing in a professional journal that would be peer reviewed.

2267 Log Collector

Design and develop a scientifically validated command line program stored on a thumb drive that gathers volatile information from a computer in the least intrusive method. The program must consist of several executable modules that run separately or together in a batch file. All modules must function in a systematic approach to collect the necessary information to identify a compromised server or computer. These methods must work from a USB thumb drive attached to the targeted server or computer.

The program must include modules with the capabilities listed in the "*IS Requirement 2667 Log Collector Technical Capabilities*" dated 2/9/2007 found on the BIDS website at [Downloads, Reference Materials](#).

When targeting computers connected to a server, the system must direct the operator to provide a list of the computers to be targeted (IP addresses or computer names). When running on a range of IPs, the application must 1) require the user to provide the specific range of IP addresses or computer names and record these; 2) require the user to provide proper credentials; and 3) ensure that the server connects to each computer on the list and save the results of the modules that were run to the server in an organized method while logging the dates and times that their operations started and finished.

The modules must perform their capabilities on computers and servers based on Windows 2000 Professional and later versions, Macintosh Universal, and Linux. The modules to the maximum extent possible must conform to guidelines of the National Institute of Standards and Technology (NIST) Special Publications 800-61 and 800-83. The system, the modules, and their applications must be minimally intrusive on the clients. The system's design must easily allow the addition of new modules with advanced functions not specified in this description. Price per unit of the final product must not exceed \$1,000.

2272 Fast Capture Simultaneous Flat Fingerprint Scanner

Develop a compact, rugged, lightweight (under one pound), simultaneous fingerprint scanner for use in military and law enforcement field operations and at border points of entry to instantly acquire ten flat, high quality, fingerprint impression sets for effective identity checks in legacy Automated Fingerprint Identification System (AFIS) databases. The device must be small (pocket size) and capable of operating under extreme environmental conditions of temperature, humidity, and contamination due to sand, dirt, or biological fluids. The device must be interoperable with all current and adaptable to future communication and computer systems that are indigenous to automated fingerprint identification. Proprietary solutions are discouraged.

The device must also meet the following requirements:

1. Resolution: 500 PPI, with potential for 1,000 PPI
2. Power: AC, DC (at least 8 hours) and USB
3. Certification: UL, FCC, CE Mark, MILSPEC 810, FBI
4. Ruggedness: High resistance to sound, glare, shock, vibration, surface contamination, and ghost or latent images
5. Reliability: Design to 1 million plus operations before fail
6. Calibration: Built-in self test and self calibration

7. Operations: Auto-sense finger position and presence, auto-start scan
8. Output: FBI/ANSI quality image ready for EFTS processing

2273 Human Scent Collection System

Develop a rugged, reliable, and compact system for canine handlers to collect human scent for future use to track a specified target. The system currently being used is too large and fragile to be used in an operational environment. The system shall be able to withstand extreme environmental conditions and temperatures and will meet the following standards:

Body:

- Shall be a polished surface, anodized aluminum housing (Black color) that contains a fan motor, power supply, and electronics;
- Shall be housed in a cylinder that measures no longer than 15 inches in length and 2.5 inches in diameter;
- Must have an independent holder that permits the unit to stand upright on its own; and
- Shall have two on/off switches:
 - One timed switch that can be externally adjusted, and
 - One standard on/off switch.

Fan:

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- Shall have the exhaust diffused around the circumference of the unit housing; shall not be a directional exhaust;
- Shall be able to maintain constant rpm within +/- 5 percent throughout the duty cycle of the battery;
- Shall be capable of running at variable speeds; and
- System battery shall be able to sustain a minimum of 30 minutes of continuous operation at the highest fan setting.

Power:

- Shall be standard C cell or D cell batteries;
- The system must provide low battery indication; and
- The system shall prevent continued operation as well as shut down if available amperage is below operating level.

Scent Pad Holder:

- Shall include Teflon-coated surgical pad holders that attach to the end of the unit body;
- Shall provide surgical pad holders in the following sizes:
 - One - 2 inch by 2 inch surgical pad holder, and
 - Two - 4 inch by 4 inch surgical pad holders
- Must be easy to clean; and
- Shall be hinged on one side with a simple latching mechanism for easy insertion of scent collection material.

Case – two cases are required:

- First, shall be a portable and watertight case that form fits the Scent Transfer Unit (STU), one replacement battery, and one surgical pad holder; and
- Second, shall be a portable and watertight case that form fits the portable STU case, batteries, battery charger, pad holders, and an empty section of the case to hold alcohol swabs, one box of nitrile gloves, disposable forceps, and scent pad material.

Cost

- Shall be no more than \$2000 for each system.

2316 Compact Forensic Field Assessment Kit

Design a field assessment kit for use in combat areas that will include testing components for explosive residue, firearm residue, drugs, and trace elements. There are many off-the-shelf test kits available, but many have low success rates, are too fragile for field use, or have very high false positive and false negative rates. The solution shall include components for the following requirements.

The components must be able to provide accurate field tests without compromising confirmatory testing at forensic laboratories. The chemical reactions to trace evidence should be an immediate color change or other visual marker to alert the soldier/investigator of a positive result. The components must also include control sample/tests to ensure accuracy prior to actual use.

The complete field assessment kit must be portable and lightweight to fit into a cargo-style pocket found on military uniforms. It must be packaged in such a manner as to avoid contamination, water and dust while protecting the contents from abuse found during combat operations. The kit shall contain products, chemicals, and reagents that are easily replaceable.

The solution shall include a training program that provides suggested scenario use, operation, and user maintenance instructions (as applicable) (e.g., video, manual, or other training aids).

5.5. Physical Security (PS)

Mission: Identify, prioritize, and execute projects that satisfy interagency requirements for physical security technology to protect personnel, vital equipment, and facilities against terrorist activity.

2300 Tri-Fusion Camera

Develop a single camera that digitally fuses video, image-intensified, and thermal images into one view for greater definition and detail for the operator. The camera shall operate at a minimum frame rate of 60 Hertz. The system shall allow the operator to manually blend images as well as have at least four programmable blending presets. It is desired that the system be capable of automatic blending. The integrating software shall ensure plug-and-play functionality with electronic security systems currently used by the military services. The primary means of communication between components shall be fiber-optic cable, coaxial cable, or a radio frequency interface (not requiring FCC licensing). Line of sight radio range/minimum wire length shall be five kilometers; however, ten kilometers is desired. The camera should be capable of being mounted on tripods, masts, and commercial pan-tilt mechanisms; however, it is desired that pan-tilt mechanisms be integrated directly into the camera. The primary power for the system shall be through a tactical generator or through facility power. The system shall have battery back-up power in the event of a power outage for at least 12 hours; however, 24 hour battery back-up is desired. The system shall be rapidly deployable (less than two hours) and rapidly recoverable (less than two hours). The system design shall minimize the use of tools for installation and recovery. It is desired that the necessary tools are currently in the U.S. Army inventory. Specialized tools, if necessary, shall be included as part of the system. The system shall be designed to be as small as possible and be capable of fitting into ruggedized, interior padded containers able to withstand standard military handling and transport. Carrying cases loaded with system components shall weigh no more than 60 pounds.

The camera shall have sufficient resolution to allow an operator to detect, recognize, and identify vehicles and personnel at the following ranges:

TARGET: Vehicles (2.3 meters x 2.3 meters)

Detect	Threshold: 8,000 meters	Objective: 14,000 meters
Recognize	Threshold: 2,500 meters	Objective: 4,000 meters
Identify	Threshold: 1,200 meters	Objective: 2,000 meters

TARGET: Personnel (1 meter x 1 meter)

Detect	Threshold: 3,000 meters	Objective: 7,000 meters
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Recognize	Threshold: 1,200 meters	Objective: 3,000 meters
Identify	Threshold: 600 meters	Objective: 1,000 meters

2302 Digital Observation Guard

Develop an intrusion detection and alerting system that contains four miniature all weather day/night cameras; it is desired that two (2) cameras come with 8 millimeter objective lenses and two (2) cameras come with 12 millimeter objective lenses; however, other sizes will be considered that meet the range requirement of up to 100 yards. All cameras shall be IR capable and have a low light rating of no greater than 0.005 lux. All cameras shall have a pan/tilt/zoom capability with 360 degree motion. It is desired that at least one camera be mast deployable. The camera wiring/mounting boxes shall require no power at the camera and shall operate at a distance of up to 1500 feet from the monitoring location. All cameras and wiring boxes shall be ruggedized for outdoor use including, but not limited to the CENTCOM operational environment. The system shall be capable of conditioning air to protect electronics and provide a working environment suitable for 24/7 operation. The system shall allow one monitor/base station to operate, observe, and digitally record all four cameras simultaneously. The base station shall contain a motion detection alert system that visually and audibly notifies the operator when the alert function is active. The operator shall be able to turn off the audible alarm if needed. The system shall digitally record and export digital images captured on the equipment with an internal CD burner. The system shall automatically record all motion detection alerts, but shall also allow the operator to manually activate the digital recorder. All camera power and data shall be transmitted from the monitor/base station to the cameras and their mounting boxes using CAT5 cable and standard CAT5 connectors. The system shall require only one user's manual. The system shall have a low unit cost; between \$3,000 and \$25,000 per system. The system shall be capable of fitting into ruggedized, interior padded containers able to withstand standard military handling and transport. The system shall be packaged in no more than four (4) containers; a single filled container shall weigh no more than 60 pounds.

5.6. Training Technology Development (TTD)

Mission: Identify, prioritize, and execute projects that satisfy interagency requirements for the development and delivery of combating terrorism related education, training, and mission performance support products and technologies.

2306 Vehicle Borne Improvised Explosive Device (VBIED) Response Training

Design and develop a technician level, skills-based training program, lasting approximately five days, to prepare bomb squad members to defeat VBIEDs using the full logic process including tools and techniques needed for both normal paced operations as well as urgent situations where rapid aggressive techniques in the assessment phase and fast remote attack methods in the defeat phase are required. The training program shall include classroom-based instruction and practical exercises necessary to make bomb technicians effective in responding to VBIEDs using a set of tools and equipment specified by a steering committee appointed by U.S. Government stakeholders and employed within a specific doctrine to be coordinated with U.S. Government stakeholders. The offeror shall have subject matter expertise in the IED domain, or partner with someone who does. The offeror is not required to use their subject matter expert(s) to conduct and implement the program of instruction and range exercises for this effort. Range exercises shall be at a facility approved by the U.S. Government.

The effort shall include, but not be limited to:

- Training Needs Analysis (TNA) based on technology and tactics, techniques, and procedures (TTP) being developed by the steering committee and will be applied in each segment of curriculum development for this project. The TNA shall include a gap analysis and alignment of existing classroom lecture presentations based on materials from multiple sources to be furnished by the U.S. Government. The TNA shall analyze topics including, but not limited to: VBIED Global Threat, VBIED Categories and Strategies, VBIED Response Principles, Diagnostics, Tool Instruction, Arrival Drills, and Load Configuration and Preparation;

- Design and development of the program of instruction and instructional materials needed to successfully implement the training program (e.g., interactive presentations, lesson plans, reference material, student materials, assessments and evaluations, etc);
- Development of visual demonstrations of proper VBIED responses, in the form of a video, animation, or other medium; and
- Development of a set of guidelines and outlines for range exercises in which each student will learn and then demonstrate performance on the essential elements of VBIED diagnostics and defeat. For purposes of the range exercises in this program, the steering committee will provide guidance in the development of two scenarios that will illustrate the difference between operations in the normal mode and operations in the urgent mode.

2307 Modular and Interoperable Mobile Job Aids

Design and develop an automated tool to identify, extract, and configure Shareable Content Object Reference Model (SCORM) enabled sharable content objects and S1000D technical data modules as job aids. Content objects (i.e., learning objects, skills objects, reference objects, etc.) and technical data modules (i.e., performance objects, interactive electronic technical manuals, technical data) are being developed and placed in repositories where they can be extracted to meet the needs of multiple user communities. Most of this is being done through learning management systems (LMS) to construct full courses and viewers to construct job aids viewable on personal computers. In addition to LMS-based online course delivery, there is a need to assemble content objects capable of being delivered in modular form using a variety of mobile technologies and platforms: Pocket/Tablet/Wearable PCs, Mobile Phones, PDAs, etc.

There are several file formats that cannot migrate to mobile devices though they might be SCORM or S1000D conformant. This tool must be able to flag content objects that may be reused in mobile environments. The resulting tool shall be compatible with the latest version of SCORM 2004 be able to access and interface with the ADL-Registry. The objects should also be compatible with a common source database (CSDB) environment (S1000D). Mobile job aids' content ought to be derived from a CSDB where related content is likely to be distributed to other channels. The tool shall be rooted into a CSDB environment where source content is managed. The tool must provide for linkages to commercial-off-the-shelf (COTS) and open-source learning management systems (LMSs) including offline players as well as S1000D viewers. The linkage to these systems is important to enable the appropriate tracking and management of content that is tracked to the specific needs of the user. The tool will require the use of S1000D for technical equipment source content and the use of Darwin Information Typing Architecture for non-technical source content such as language and culture, and disaster relief information. The tool shall provide users with an easy-to-use, human-system interface and navigation and shall conform to World Wide Web Consortium (W3C) Web technology standards and applicable accessibility standards. A demonstration of the tool using Government-approved content shall be included as a deliverable. The content should be based on true and actual government content and use cases evident in the field that can be applied to actual working and performance scenarios. The tool shall be operational via standard industry Web browsers operating on personal computer systems with the following minimum system requirements – Pentium III/IV or equivalent, 500 MHz, 256 MB RAM, audio and video capable, 32X CD-ROM, 56K modem, with Windows 2000, or XP operating system.

2308 Modeling and Simulation Selection Tool

Develop standard evaluation criteria for models, simulations, and games for use by the civilian emergency preparedness and response community addressing various scenarios at the federal, state, local, and regional level by individuals, teams, or groups of teams of various sizes as employed in operational scenarios. The criteria shall address, but is not limited to: live, virtual, and constructive uses; audience size; co-located as well as geographically separate audiences; level of interactivity; disciplines and specialties addressed and relative weighting for multi-discipline technologies; initial and sustainment costs reflecting total cost of ownership based on

purchase, maintenance, and operation cost including initial and ongoing training, familiarization, or other costs for effective use of the technology; required computer specifications and peripherals; interoperability with other systems; technology platforms required and supported (desktop, laptop, handheld, other portable devices); compliance with technical and functional standards (i.e., technical standards such as SCORM, CORDRA, XML and functional standards such as NFPA 472, OSHA 19010.120); and linkage to national priorities/target capabilities for homeland security (i.e., NIMS/NRP implementation including various levels of resource types, NIPP implementation, medical surge, mass prophylaxis, etc.).

Based on the evaluation criteria developed, the offerer shall develop a software tool which will allow users to search for a model, simulation, or game appropriate for their particular scenario and receive recommendations based on the criteria developed and the user's constraints and ranking of relative importance of those criteria. The tool shall also allow users to enter a particular model, game, or simulation they are considering for purchase and shall walk them through pre-purchase questions associated to the established criteria and provide an assessment of whether the technology being considered is likely or not likely to meet their requirements as described. The tool shall have the capability to add the technology being considered to the supporting database if it is not already included. Vendors of models, games, and simulations shall be provided with an interface to provide and update information on existing and new technology solutions in accordance with the evaluation criteria.

To be responsive to this requirement, an open database containing all existing models, simulations, and games is not desired. Additionally, existing simulation database efforts (HSEEP DSS, RKB, DMSO) do not satisfy the robust criteria required for civilian decision makers. Rather, the requirement for the selection matrix and tool seeks to build the capability to allow the user to make an informed decision by searching for a model, game or simulation against a set of objective criteria and applicable standards (NFPA, OSHA, etc.).

2309 MILES Capability for Long Range and Special Weapons

Develop Multiple Integrated Laser Engagement System (MILES) capability to incorporate long range and special weapons into force-on-force exercises for more realism and better data acquisition. The effort shall include expanding the capability of MILES weapons systems to accurately mimic the recoil and accuracy of special weapons. Weapons may include, but are not limited to: MK-19, CheyTac m-400, Barrett .50cal, and RPG7.

The MILES weapon system should look, feel, and operate like the real weapons system. The MILES weapons should accurately replicate weight and dimensions of weapon system, recoil, ballistics, ammunition, accuracy, and lethality for identical weapon/ammunition combinations (i.e., ability to trace performance to probability of hit/kill). In addition, it must be able to mount sighting systems that the operational system is able to mount and visually resemble the weapons system. Developments must be backward compatible with current MILES systems in place. The weapon must function and load like the real weapon. If it is a crew served system, it should require a crew or if it is a vehicle mounted system, it must be able to be mounted on the current mounts in use (i.e., must be able to accurately mimic the full up weapon system short of sending a round down range). Successful operability will be measured by comparing the system to the real weapons system for function, weight, recoil, mounting of sighting systems, mounting on vehicles, and firing.

000-TTD Unspecified Requirement - TTD

Develop training and training technologies to increase mission readiness and enhance the operational capabilities of all elements, to include both military and civilian communities, involved in combating terrorism and consequence management. The technologies shall provide valuable knowledge, skills, and abilities in order to deter, defeat, prevent, protect, mitigate, and respond to terrorist threats. This includes the development of new or improved computer-based combating terrorism training courses, advanced programs of instruction, delivery architectures, training aids, devices, and simulations. These training products shall support the life cycle of research and

development to include design, development, implementation, evaluation, verification and validation testing, and technology transition. Additionally, all proposed computer-based training solutions shall prototype and establish state-of-the-art Advanced Distributed Learning (ADL) delivery systems that are Shareable Content Object Reference Model (SCORM) 2004 conformant to military and civilian personnel involved in combating terrorism and emergency response.

Areas of interest include, but are not limited to:

- Analysis of real-time language translation tools as learning tools;
- Operational threat assessment, training needs analysis, and resulting solutions focused on increasing awareness and preparedness for U.S. Embassies;
- Enhanced tracking dog capability;
- Interagency capability for training and sustaining knowledge in irregular warfare concepts and doctrine; and
- Interactive equipment training solutions.

Unspecified requirements (R000) are for proposing unique innovations that have not yet been identified by TSWG. Submissions against a particular subgroup's unspecified requirement should be relevant to that subgroup's mission. TSWG does not budget for unspecified requirements. If the evaluation team determines that an unspecified requirement submission is promising enough to merit pursuing, funds will be identified at that point. Because proposed technologies from the unspecified requirements will be competing against proposed technologies for identified and prioritized interagency requirements, TSWG may not be able to make any awards against the unspecified requirements.

5.7. VIP Protection (VIP)

Mission: Identify, prioritize, and execute projects that satisfy interagency requirements for unique equipment and systems to alert and prevent attacks on VIP protectees. This includes hardware and tools that provide security to both the VIPs and their protectors. Inherent in this development is additional emphasis on life safety and emergency response equipment.

2294 Wireless Emergency Vehicle Kit

Develop a lightweight, portable emergency vehicle kit for installation in temporary VIP vehicles. The kit must be comprised of a master control panel, four interior-mounted lights (front, rear, sides), and a siren with adjustable volume control. Light and siren components must be wireless to avoid safety hazards in the event personnel must quickly enter or exit the vehicle. Wireless components must operate continuously for a minimum of six hours. Rechargeable batteries are preferred. Users must be able to install the kit in under 10 minutes without the use of tools. The system must be packaged in a civil aviation carry-on container (approximately 9 inches by 14 inches by 22 inches), and be versatile enough for use in vehicles of all sizes.

2295 Protective Services Portal

Research current procedures used by the federal protective services community and develop standardized guidelines to promote consistent operations and increased interoperability. Develop a secure web-based application that provides controlled access to the standardized guidelines and allows users to develop operations plans using online standardized templates. The application must store operations plans in a searchable database, with various levels of access for authorized users. The tool shall be operational via standard industry Web browsers operating on personal computer systems with the following minimum system requirements: Pentium III/IV or equivalent, 500 MHz, 256 MB RAM, audio and video capable, 32X CD-ROM, 56K modem, with Windows 2000, or XP operating system.

2297 Autonomous Roof Top Surveillance

Develop an autonomous roof top surveillance system that provides commercially encrypted (AES, DES3, FIPS 140-2) near real-time video streaming operations to an existing mobile

command center via the cellular infrastructure. The surveillance system must include color and thermal imaging at a minimum range of 500 yards with the capability to differentiate objects. The camera must have a 60 degree field of view, pan/tilt/zoom via command center control, and run for a minimum of 30 days without service requirements. It is suggested alternative power supplies be used for the system. The rooftop system must be packaged in transportable cases. The mobile command center will be made available for system design and validation.

ATTACHMENT A – ACRONYMS AND ABBREVIATIONS

µg	micrograms	CDC	Center for Disease Control
24/7	Twenty-four hours/Seven days per week	CDR	Critical Design Review
3-D	Three-Dimensional	CD-ROM	Compact Disc Read Only Memory
AC	Alternating Current	CENTCOM	U.S. Central Command
ACLS	Advanced Cardiac Life Support	C.F.R.	Code of Federal Regulations
ADL	Advanced Distributed Learning	cm	centimeter
AES	Advanced Encryption Standard	CMU	Concrete Masonry Unit
AFIS	Automated Fingerprint Information System	COFDM	Coded Orthogonal Frequency Division Multiplexing
ANSI	American National Standards Institute	COR	Contracting Officer's Representative
APR	Air Purifying Respirator	CORDRA	Content Object Repository Discovery and Registration/Resolution Architecture
ASTM	American Society for Testing and Materials	COTS	Commercial-off-the-shelf
ATLS	Advanced Trauma Life Support	CPFF	Cost Plus Fixed Fee
ATP	Active Thermal Protection	CPU	Central Processor Unit
AUV	Autonomous Underwater Vehicle	CQB/SWAT	Close Quarter Battle/Special Weapons Assault Team
BAA	Broad Agency Announcement	CSA	Canadian Standards Association
BATM	Biological Aerosol Test Method	CSDB	Common Source Database
BIDS	BAA Information Delivery System	CT	Computed Tomography
BX	Blast Effects and Mitigation (mission area/subgroup designation)	CTTSO	Combating Terrorism Technology Support Office
C	Celsius	DAIS	Digital Automotive Image System
C3	Command, Control, and Communications	DC	Direct Current
C4	Composition 4 (explosive)	DES	Data Encryption Standard
CAD	Computer Aided Drawing	DFARS	Defense Federal Acquisition Regulation Supplement
CASB-CMF	Cost Accounting Standards (CAS) Board - Cost of Money Factors	DHS	Department of Homeland Security
CB	Chemical, Biological, Radiological, and Nuclear Countermeasures (Also CBRNC or CBRN or CBR) (mission area/subgroup designation)	DMSO	Defense Modeling and Simulation Office
CBRN	Chemical, Biological, Radiological, and Nuclear	DNA	Deoxyribonucleic acid
CCD	Charge-Coupled Device	DoD	Department of Defense
CCR	Central Contractor Registration	DOE	Department of Energy
CCTL	Common Criteria Testing Labs	DOT	Department of Transportation
CD	Concept Development (mission area/subgroup designation); Also Compact Disk	DPI	Dots per inch
		DTRA	Defense Threat Reduction Agency
		DUNS	Data Universal Numbering System
		ED	Explosives Detection (mission area/subgroup designation)
		EFTS	Electronic Fingerprint Transmission Specification
		EL	Explosive Ordnance Disposal/Low-Intensity Conflict (Also EOD/LIC) (mission area/subgroup

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	designation)	HME	Homemade Explosive Materials
EOD	Explosive Ordnance Disposal	HPAC	Hazard Protection and Assessment Capability
EOD/SOF	Explosive Ordnance Disposal/Special Operations Forces	HSEEP	Homeland Security Exercise and Evaluation Program
EPA	Environmental Protection Agency	HUB Zone	Historically Underutilized Business Zone
ERPG	Emergency Response Planning Guidelines	HUD	Head's Up Display
ET	Eastern Time Zone	HVAC	Heating, Ventilation, and Air Conditioning
ETD	Explosives Trace Detection	Hz	Hertz
ET-SCBA	Expedient Tactical Self-Contained Breathing Apparatus	ICIDS	Integrated Commercial Intrusion Detection System
F	Fahrenheit	IDD	Improvised Device Defeat (mission area/subgroup designation)
FAQ	Frequently Asked Question	IDHL	Immediately Dangerous to Health or Life
FAR	Federal Acquisition Regulation	IED	Improvised Explosive Device
FBI	Federal Bureau of Investigation	IMS	Ion Mobility Spectrum
FCC	Federal Communications Commission	IO	Input/Output
FCCM	Facilities Capital Cost of Money	IP	Infrastructure Protection (mission area/subgroup designation); also Internet Protocol
FDA	Food and Drug Administration	IR	Infrared
FDE	Forensic Document Examiner	IRB	Institutional Review Board
FDR	Flight Data Recorder	IRIG	Inter-Range Instrumentation Group
FFT	Fast Fourier Transform	IS	Investigative Support and Forensics (Also ISF) (mission area/subgroup designation)
FIPS	Federal Information Processing Standards	IWS	Irregular Warfare Support (mission area/subgroup designation)
FOIA	Freedom of Information Act	JAUS	Joint Architecture for Unmanned Systems
FORAX	Fiber Optic Remote Amplifier Extension	JPEG	Joint Photographic Experts Group
FP	Full Proposal	K	Thousand
fps	Feet per second	kB	Kilobyte
FSW	Feet of Sea Water	keV	Kilo-electron volts
ft	Feet	kg	Kilograms
FY	Fiscal Year	kV	Kilovolt
G/T	Gain to Noise	L	Liter
GFE	Government Furnished Equipment	LANL	Los Alamos National Laboratory
GFI	Government Furnished Information	Lbs	Pounds
GFM	Government Furnished Material	LCD	Liquid crystal display
GIF	Graphics Interchange Format	LED	Light emitting diodes
GIS	Geographic Information System	LIC	Low-Intensity Conflict
GOTS	Government-off-the-shelf	LMS	Learning Management System
GPS	Global Positioning System	LOS	Line of Sight
GSR	Gunshot Residue	LVB	Large Vehicle Bomb
GUI	Graphical User Interface		
GWOT	Global War on Terror		
HAZMAT	Hazardous Materials		
HBCU	Historically Black Colleges and Universities		
He	Helium		

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LUX	Lumen per square meter	PCR	Polymerase Chain Reaction
MANPADS	Man Portable Air Defense System	PCS	Process Control System
MB	Megabyte	PDA	Personal Digital Assistant
MBITR	Multi-Band Inter/Intra Team Radio	PDF	Portable Document Format
mg/L	milligram per liter	PDR	Preliminary Design Review
MHz	Megahertz	PETN	pentaerythritol tetranitrate
MI	Minority Institutions	pg/ml	picograms per milliliter
MILES	Multiple Integrated Laser Engagement System	PL	Public Law
MILSPEC	Military Specification	POC	Point of Contact
ml/min	milliliter per minute	POP	Period of Performance
mm	millimeter	POTS	Plain Old Telephone Service
mR	milli-Roentgen	PPE	Personal Protective Equipment
MOA	Minute of angle	PPI	Pixels per Inch
MSR	Monthly Status Report	PS	Physical Security (mission area/subgroup designation)
MSS	Mobile Screening System	PSTN	Public Switched Telephone Network
NAICS	North American Industry Classification System	PSYOPS	Psychological Operations
NATO	North Atlantic Treaty Organization	QC	Quad Chart
NBC	Nuclear, Biological, and Chemical	QUIC	Quick Urban and Industrial Complex
NCID	National Critical Infrastructure Database	R&D	Research and Development
NFPA	National Fire Protection Association	Rad	Radians
NGEODRCV	Next Generation Explosive Ordnance Disposal Remote Controlled Vehicle	RAM	Random Access Memory
NIJ	National Institute of Justice	RAMP	Remote Multi-band Amplifier
NIMS	National Incident Management System	RCV	Remote Controlled Vehicle
NIOSH	National Institute for Occupational Safety and Health	RDD	Radiological Dispersion Device
NIPP	National Institute for Public Policy	RDX	Cyclotrimethylenetrinitramine
NIST	National Institute of Standards	RF	Radio Frequency
NRP	National Response Plan	RFID	Radio Frequency Identification
NVG	Night Vision Goggles	RH	Relative Humidity
OA	Operational Analysis	RKB	Responder Knowledge Base
OAS	Obstacle Avoidance System	ROM	Rough Order of Magnitude
OASD	Office of the Assistant Secretary of Defense	RPG	Rocket Propelled Grenade
OCU	Operator Control Unit	RT	Receiver/Transmitters
ORCA	Online Representations and Certifications Application	SAHRV	Semi-Autonomous Reconnaissance Vehicle
OS	Operating System	SBA	Small Business Administration
OSHA	Occupational Safety and Hazard Association	SC	Surveillance, Collection, and Operations Support (Also SCOS) (mission area/subgroup designation)
PAPR	Powered Air Purifying Respirator	SCADA	Supervisory Control and Data Acquisition
PC	Personal Computer	SCBA	Self-Contained Breathing Apparatus
PCB	Printed Circuit Board	SCORM	Shareable Content Object Reference Model
		SECNAVINST	Secretary of the Navy Instruction
		SEI	Software Engineering Institute
		SDB	Small Disadvantaged Business
		SF	Special Forces; also Standard Form

SIT	Submitter Internal Tracking (Number)
SNM	Special Nuclear Material
SOF	Special Operating Forces
SO/LIC	Special Operations/Low- Intensity Conflict
SOW	Statement of Work
SVGA	Super Video Graphics Array
SWAT	Special Weapons Assault Team
TASS	Tactical Automated Security System
TATP	triacetone triperoxide
TIC	Toxic Industrial Chemical
TIM	Toxic Industrial Material
TNA	Training Needs Analysis
TOS	Tactical Operations Support (mission area/subgroup designation)
TSA	Transportation Security Administration
TSP-Secure	Team Software Process for Secure Software Development
TSWG	Technical Support Working Group
TTD	Training Technology Development (mission area/subgroup designation)
TTL	Tagging, Tracking, and Locating
TTP	Tactics, Techniques, and Procedures
UAV	Unmanned Air Vehicle
UL	Underwriter's Laboratory
UML	Unified Modeling Language
USAR	Urban Search and Rescue
USB	Universal Serial Bus
U.S.C.	United States Code
UV	Ultraviolet
VAC	Volts AC (alternating current)
VBIED	Vehicle Borne Improvised Explosive Device
VCSTC	Virtual Cyber Security Testing Capability
VCU	Vehicle Control Unit
VIP	Very Important Person
VIP	VIP Protection (mission area/subgroup designation)
VOIP	Voice Over Internet Protocol
VPN	Virtual private network
W3C	World Wide Web Consortium
WMD	Weapons of Mass Destruction
WP	White Paper
XML	Extensible Markup Language